

# 2009 Montana High School Youth Risk Behavior Survey Results



## Dietary Behaviors and Physical Activity

Prepared for

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Montana  
**Office of Public Instruction**  
Denise Juneau, State Superintendent



## Montana Youth Risk Behavior Survey

The Youth Risk Behavior Survey (YRBS) monitors six categories of priority health-risk behaviors among youth and young adults, including behaviors that contribute to unintentional injuries and violence; tobacco use; alcohol and other drug use; sexual behaviors that contribute to unintended pregnancy and sexually transmitted diseases (STDs), including human immunodeficiency virus (HIV) infection; unhealthy dietary behaviors; and physical inactivity. In addition, the YRBS monitors the prevalence of obesity and asthma.

### Survey Validity

The Montana YRBS includes high school results for which random sampling procedures were followed and weighted data has been obtained (i.e., the data can be used to make inferences

about the health-risk behaviors of all Montana high school youth). The data results for the American Indian and Montana regional data are based on census sampling procedures, therefore it is only valid to attribute the results of this survey to those students who reported their behaviors in response to the 91 items in the questionnaire.

### Report Results

This report includes data from Montana high schools, two American Indian student reports, and the nine Montana regional reports. The Montana YRBS produces two sets of data results for American Indian youth: *American Indian Students On or Near a Reservation* and *American Indian Students in Urban Schools*. The regional data results for the nine Montana Association of School Superintendents (MASS) regions is also included in this report.



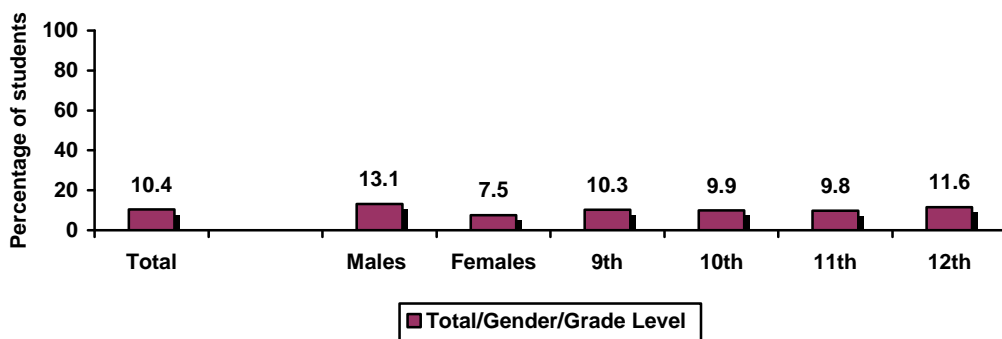
## OBESITY, OVERWEIGHT, AND WEIGHT CONTROL

Obesity, overweight, and weight control questions measure self-reported height and weight and perceived body weight. Data on self-reported height and weight is used to calculate body mass index (BMI) and determine the corresponding BMI-for-age percentile for adolescents. BMI-for-age percentile is a proxy measure of weight status, correlates with body fat, and is recommended for assessing weight status in youth ages 2-20. Although obesity prevalence estimates derived from self-report data are likely to be low, the data are useful for tracking trends over time. In addition, obesity prevalence trends from national surveys of adults using self-reported height and weight have been consistent with trend data from national surveys using measured height and weight. It is critical to continue monitoring these data because the prevalence of obesity among adolescents has tripled since 1980. Obesity during adolescence is associated with negative psychological and social consequences and health problems such as type 2 diabetes, obstructive sleep apnea, hypertension, dyslipidemia, and metabolic syndrome. Further, obese adolescents are more likely to become obese adults. Nationwide in 2007, 13% of high school students were obese and 16% were overweight. In Montana, during 1999-2007, significant increases occurred in the percentage of students who were obese (6%-10%) and who were overweight (10%-13%).

### 2009 Montana High School YRBS Results

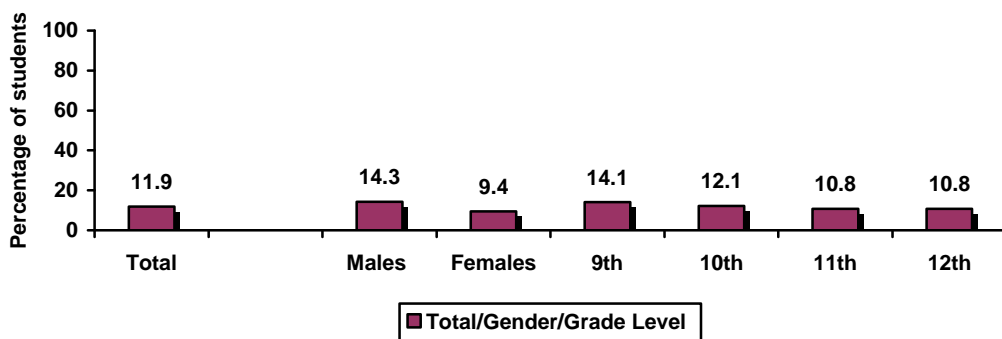
#### Obesity

Statewide, 10.4% of students were obese (i.e., at or above the 95<sup>th</sup> percentile for body mass index, by age and sex).



#### Overweight

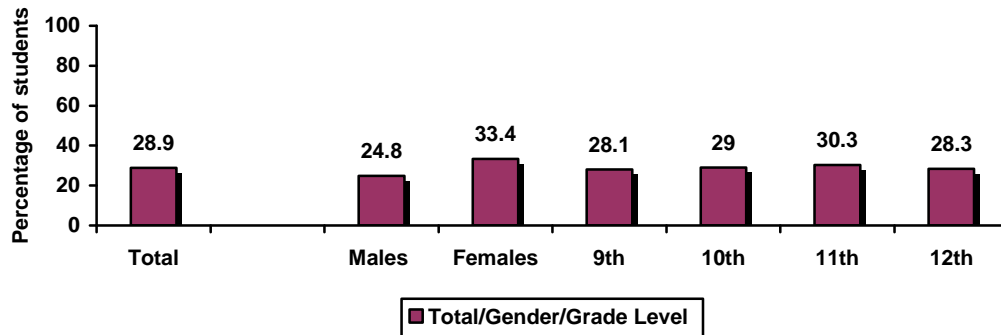
Statewide, 11.9% of students were overweight (i.e., at or above the 85<sup>th</sup> percentile but below the 95<sup>th</sup> percentile for body mass index, by age and sex).



## 2009 Montana High School YRBS Results

### Described Themselves as Overweight

Statewide, 28.9% of students described themselves as slightly or very overweight.



### Weight Control Practices

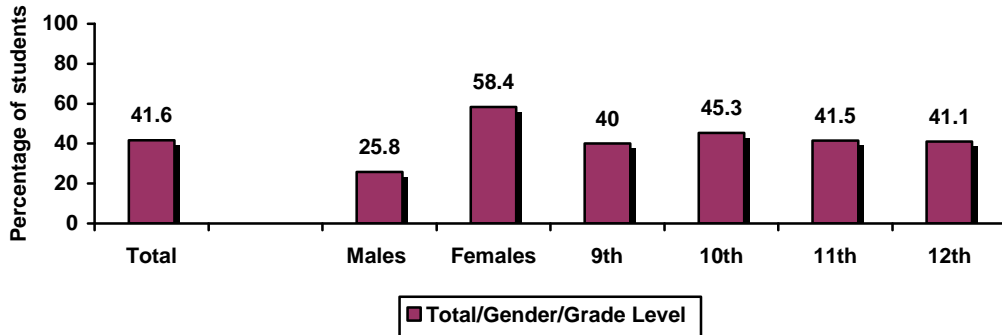
Unhealthy weight control behaviors include fasting, taking diet pills or laxatives, or inducing vomiting. Engaging in unhealthy weight control behaviors may result in health and psychological problems such as obesity, eating disorders such as anorexia and bulimia, and stunted growth. Disordered eating behaviors are correlated with inadequate nutrient intake, low self-esteem, high levels of depression, suicidal ideation, high levels of stress, and alcohol and drug use. National and state comparisons with 2007 YRBS results show that:

- 45% of U.S. high school students and 44% of Montana students were trying to lose weight.
- 12% of high school students nationwide and in Montana did not eat for 24 or more hours to lose weight or to keep from gaining weight.
- Nationwide and in Montana, 6% of high school students had taken diet pills, powders, or liquids without a doctor's advice to lose weight or to keep from gaining weight during the 30 days before the survey.
- More Montana students, 6% as compared to 4% of high school students nationwide, had vomited or taken laxatives to lose weight or to keep from gaining weight during the 30 days before the survey.
- During 1995-2007, the percentage of U.S. students who exercised to lose weight or to keep from gaining weight during the 30 days before the survey increased from 51% to 61% (among Montana students an increase from 54% to 62%).
- The percentage of students nationwide who ate less food, fewer calories, or low-fat foods to lose weight or to keep from gaining weight during the 30 days before the survey increased during 1999-2001 (40%-44%) and then decreased during 2001-2007 (44%-41%). Among Montana high school students during the years 1999-2007, the prevalence for low-caloric intake during the past 30 days has been between 39%-40%.

## 2009 Montana High School YRBS Results

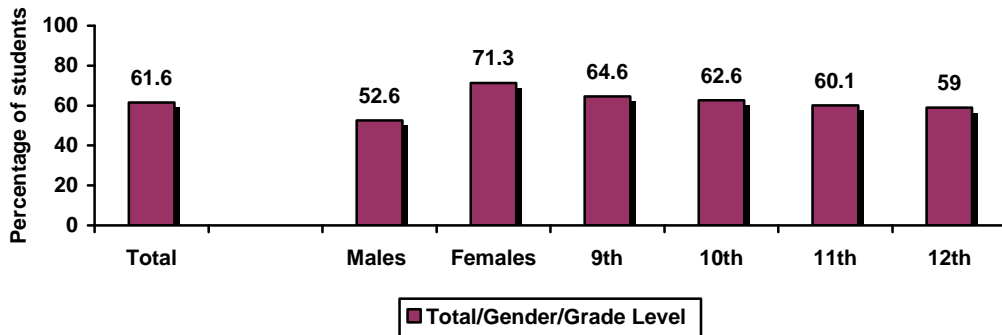
### Were Trying to Lose Weight

Statewide, 41.6% of students were trying to lose weight.



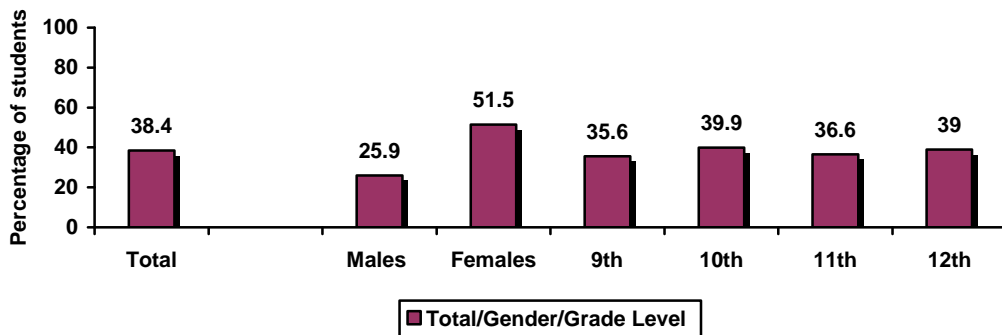
### Exercised to Lose Weight or to Keep from Gaining Weight

Statewide, 61.6% of students had exercised to lose weight or to keep from gaining weight during the 30 days before the survey.



### Ate Less Food, Fewer Calories, or Low-Fat Foods to Lose Weight or to Keep from Gaining Weight

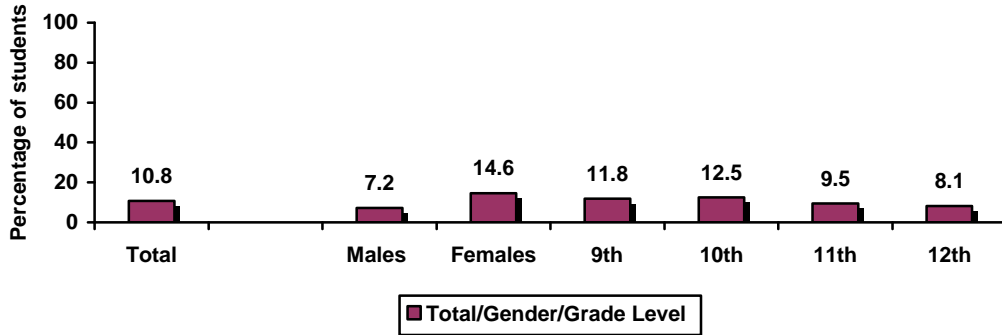
During the 30 days before the survey, 38.4% of students statewide had eaten less food, fewer calories, or low-fat foods to lose weight or to keep from gaining weight.



## 2009 Montana High School YRBS Results

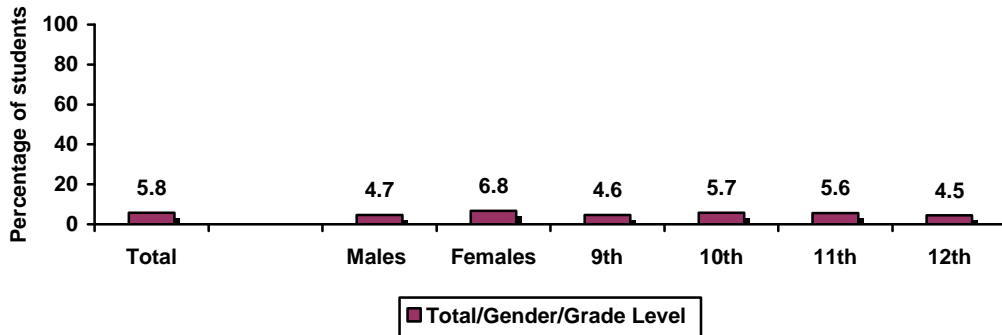
### Did Not Eat for 24 or More Hours to Lose Weight or to Keep from Gaining Weight

Statewide, 10.8% of students did not eat for 24 or more hours to lose weight or to keep from gaining weight during the 30 days before the survey.



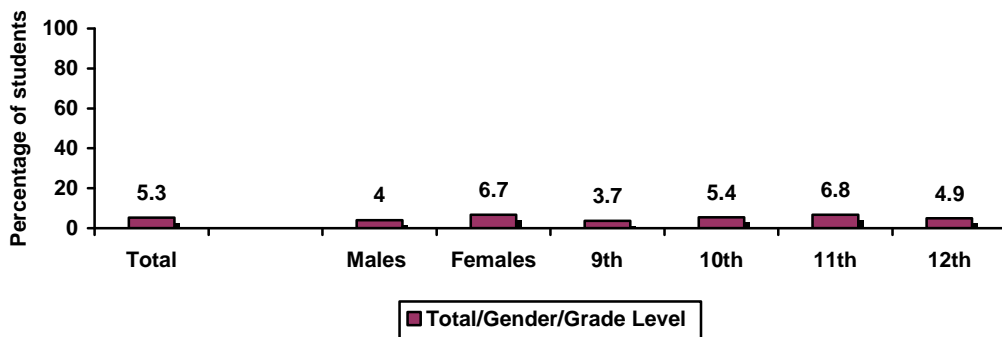
### Took Diet Pills, Powders, or Liquids to Lose Weight or to Keep from Gaining Weight

During the 30 days before the survey, 5.8% of students statewide had taken diet pills, powders, or liquids without a doctor's advice to lose weight or to keep from gaining weight.



### Vomited or Took Laxatives to Lose Weight or to Keep from Gaining Weight

Statewide, 5.3% of students had vomited or taken laxatives to lose weight or to keep from gaining weight during the 30 days before the survey.





## Dietary Practices

The questions measuring dietary behaviors include consumption of fruits and vegetables, soda or pop and milk. The fruit and vegetable questions are similar to questions asked of adults on the CDC's Behavioral Risk Factor Survey. Fruits and vegetables are good sources of complex carbohydrates, vitamins, minerals, and other substances that are important for good health. There is probable evidence to suggest that dietary patterns with higher intakes of fruits and vegetables are associated with a decreased risk for some types of cancer, cardiovascular disease, and stroke. Although data are limited, an increased intake of fruits and vegetables appears to be associated with a decreased risk of being overweight.

- In 2007, 21% of U.S. students (17% of Montana students) ate fruits and vegetables five or more times per day during the 7 days before the survey.

Milk is an important source of calcium for adolescents. Calcium is essential for forming and maintaining healthy bones and low calcium intake during the first two to three decades of life is an important risk factor in developing osteoporosis. Although the recommended intake of calcium is 1,300 mg/day, most adolescents consume far less. National data indicate that the average calcium intake per day among persons aged 12 to 19 years was 1,125 mg/day (among males) and 814 mg/day (among females).

- In 2007, 14% of high school students nationwide (19% of Montana students) had drunk three or more glasses of milk per day during the 7 days before the survey.

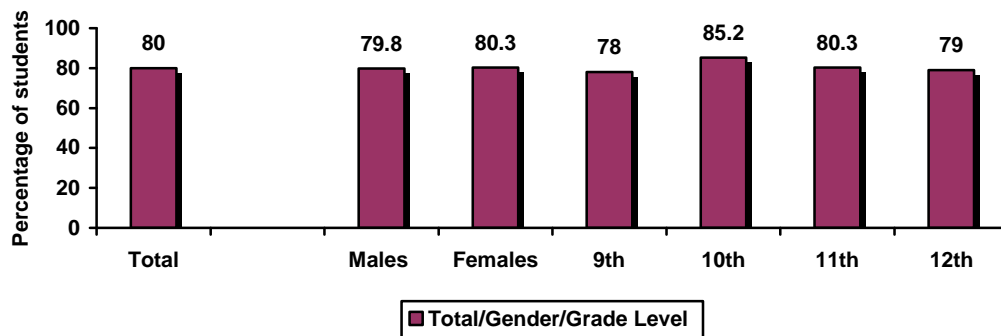
In recent years, soft drink consumption has significantly increased among children and adolescents. Among persons aged 2 to 18 years, soft drinks comprised 3% of the total daily calories consumed in 1977-1978 compared to 7% in 1999-2001. Consumption of sugar-sweetened drinks, including soft drinks, appears to be associated with an increased risk for overweight in children.

- In 2007, 34% of high school students nationwide (26% of Montana students) had drunk a can, bottle, or glass of soda or pop (not including diet soda or diet pop) at least one time per day during the 7 days before the survey.

## 2009 Montana High School YRBS Results

### Drank 100% Fruit Juices

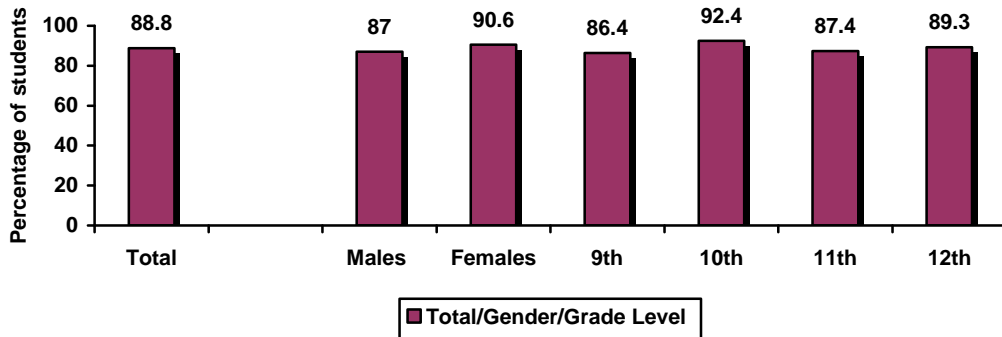
Statewide, 80.0% of students had drunk 100% fruit juices one or more times during the past seven days.



## 2009 Montana High School YRBS Results

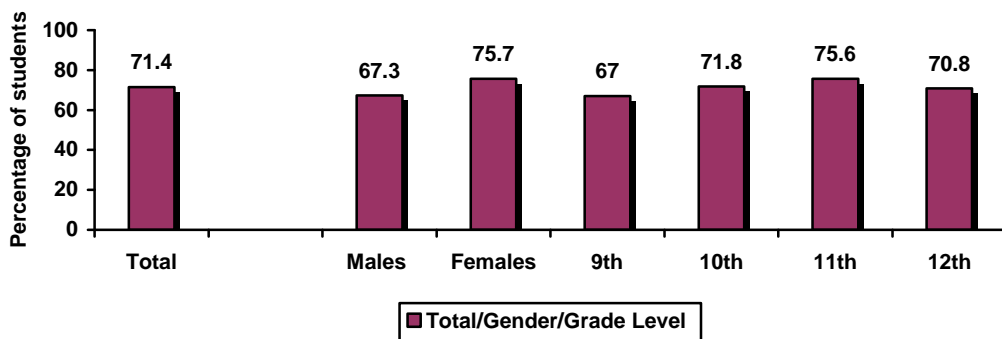
### Ate Fruit

Statewide, 88.8% of students had eaten fruit one or more times during the past seven days.



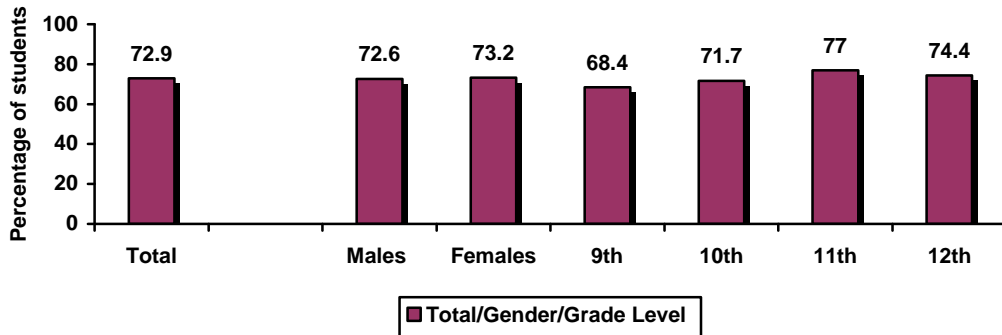
### Ate Green Salad

Statewide, 71.4% of students had eaten green salad one or more times during the past seven days.



### Ate Potatoes

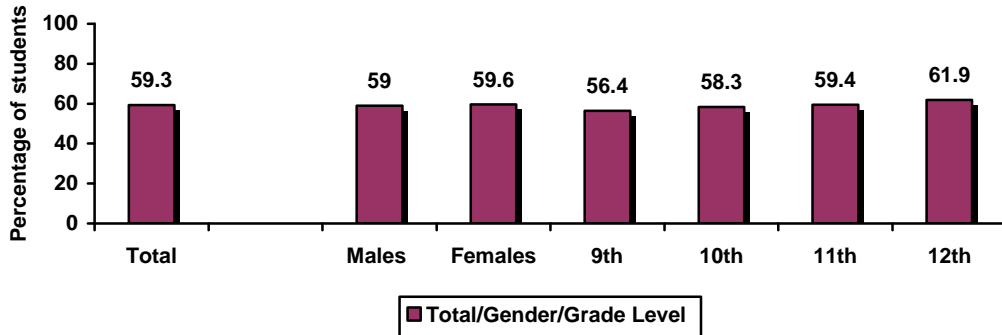
Statewide, 72.9% of students had eaten potatoes (not including french fries, fried potatoes, or potato chips) one or more times during the past seven days.



## 2009 Montana High School YRBS Results

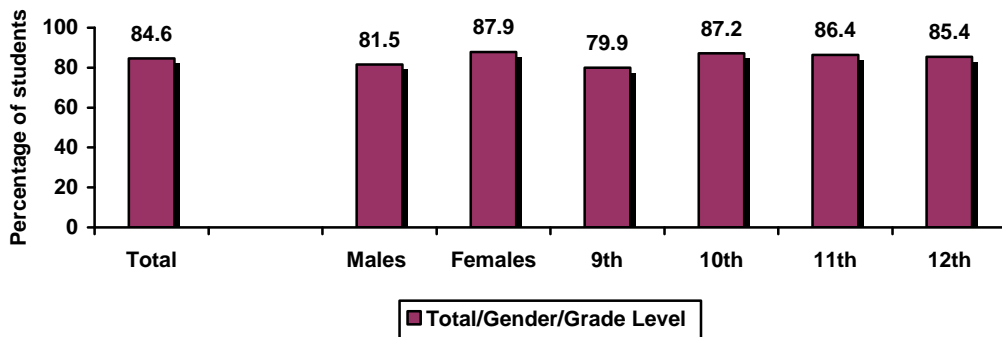
### Ate Carrots

Statewide, 59.3% of students had eaten carrots one or more times during the past seven days.



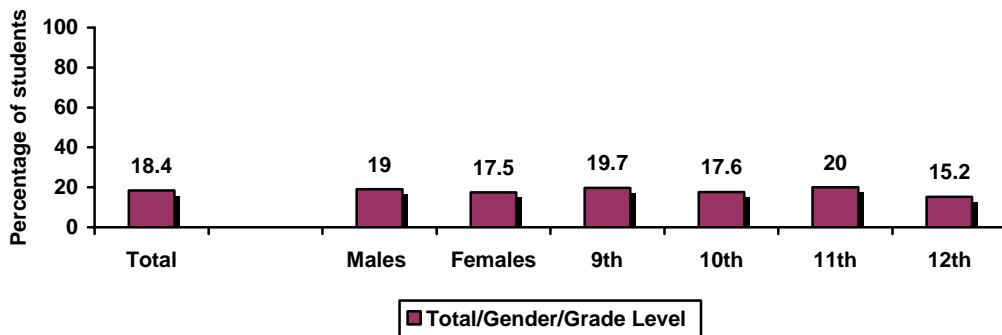
### Ate Other Vegetables

Statewide, 84.6% of students had eaten other vegetables (not including green salad, potatoes, or carrots) one or more times during the past seven days.



### Ate Fruits and Vegetables Five or More Times per Day

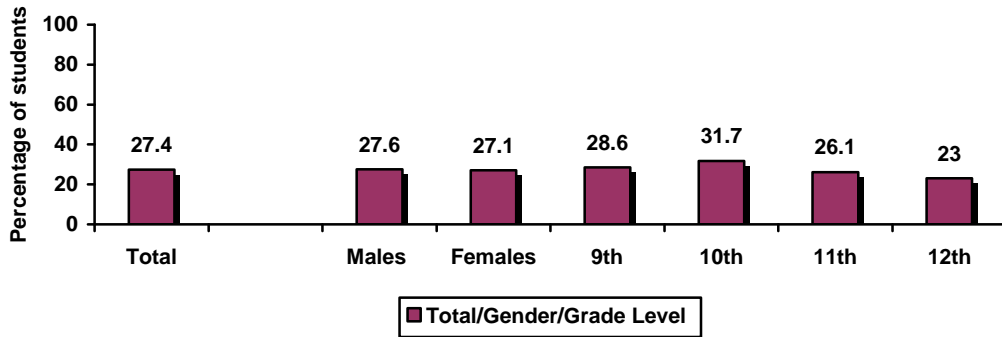
Statewide, 18.4% of students had eaten fruits and vegetables five or more times per day during the seven days before the survey.



## 2009 Montana High School YRBS Results

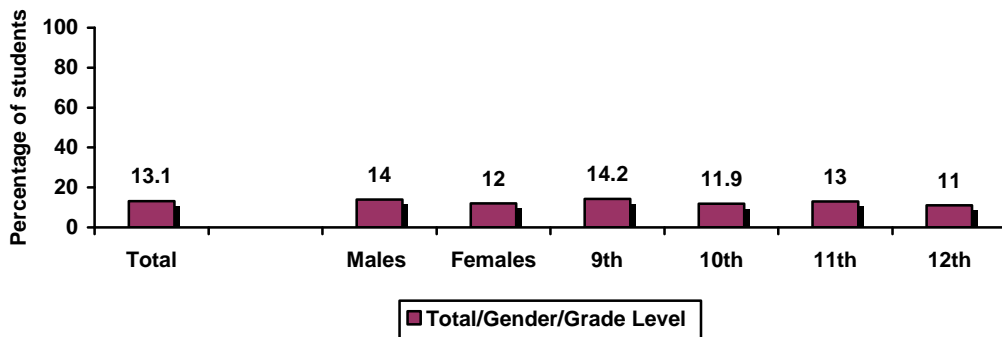
### Ate Fruits Two or More Times per Day

Statewide, 27.4% of students had eaten fruit two or more times per day during the seven days before the survey.



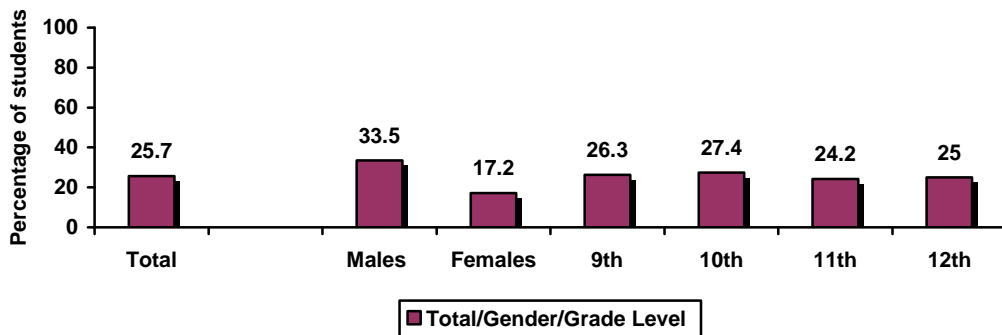
### Ate Vegetables Three or More Times per Day

Statewide, 13.1% of students had eaten vegetables three or more times per day during the seven days before the survey.



### Drank Soda or Pop at Least One Time per Day

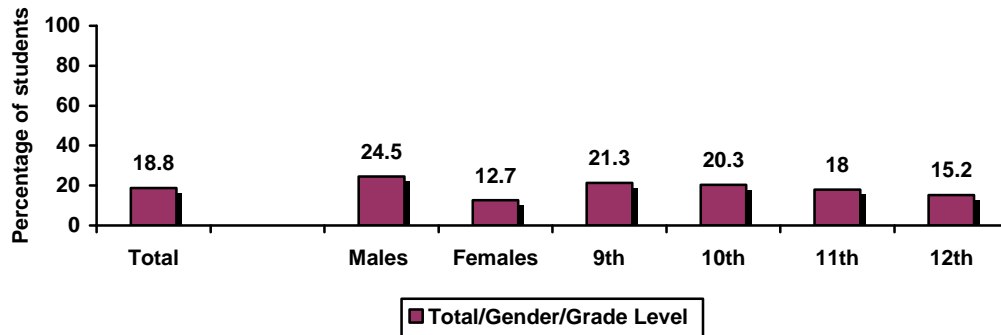
Statewide, 25.7% of students had drunk a can, bottle or glass of soda or pop (not including diet soda or diet pop) at least one time per day during the seven days before the survey.



## 2009 Montana High School YRBS Results

### Drank Three or More Glasses of Milk per Day

Statewide, 18.8% of students had drunk three or more glasses of milk per day during the seven days before the survey.



### Physical Activity

Physical activity questions measure participation in physical activity, physical education classes, sports teams, television watching, and video game/computer use. Participation in regular physical activity among young people can help build and maintain healthy bones and muscles, maintain body weight and reduce body fat, reduce feelings of depression and anxiety, and promote psychological well-being. Over time, regular physical activity decreases the risk of high blood pressure, heart disease, diabetes, some types of cancer, and premature death. The 2005 Dietary Guidelines for Americans (U.S. Department of Health and Human Services and U.S. Department of Agriculture) recommends that youth engage in at least 60 minutes of physical activity on most, preferably all, days of the week.

- In 2007, 35% of high school students nationwide (45% of Montana students) had been physically active doing any kind of physical activity that increased their heart rate and made them breathe hard some of the time for a total of at least 60 minutes/day on five or more days during the past seven days.

School physical education classes can increase adolescent participation in physical activity and help high school students develop the knowledge, attitudes, and skills they need to engage in lifelong physical activity.

- In 2007, 54% of high school students nationwide (54% of Montana students) attended physical education classes on one or more days in an average week when they were in schools.

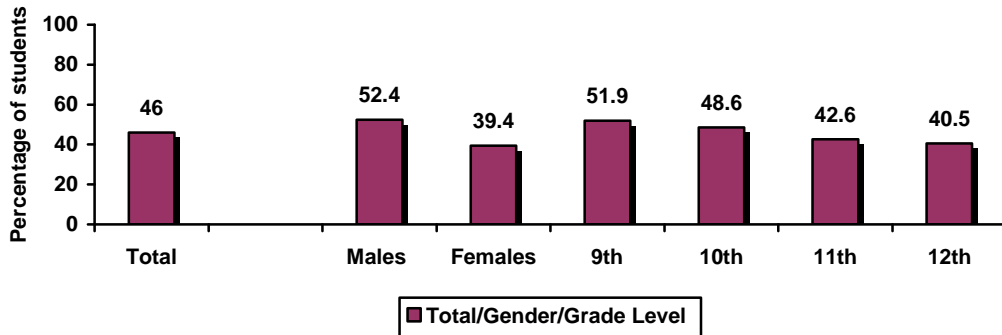
Television (TV) viewing, computer usage, and video/DVD usage are all considered sedentary behaviors. Child and adolescent TV viewing, in particular, is associated with childhood and adult obesity and youth who engage in less than two hours of TV viewing per day tend to be more active. Computer usage and video game playing are associated with physical inactivity among adolescents and young adults.

- In 2007, 35% of U.S. students (22% of Montana students) watched television three or more hours per day on an average school day.

## 2009 Montana High School YRBS Results

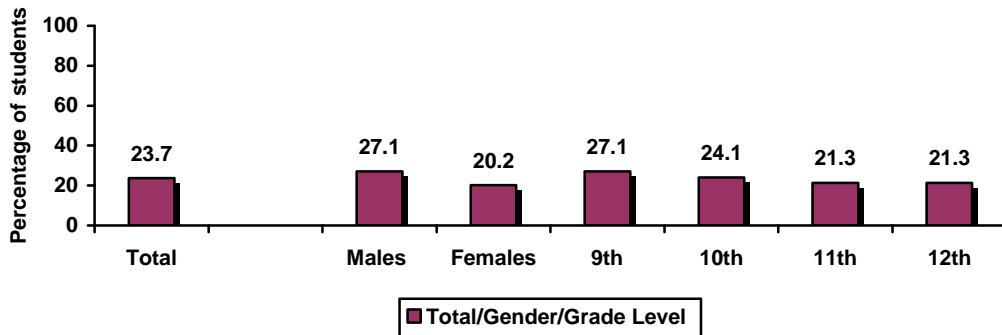
### Met Recommended Levels of Physical Activity

Statewide, 46.0% of students had been physically active doing any kind of physical activity that increased their heart rate and made them breathe hard some of the time for a total of at least 60 minutes per day on five or more days during the seven days before the survey.



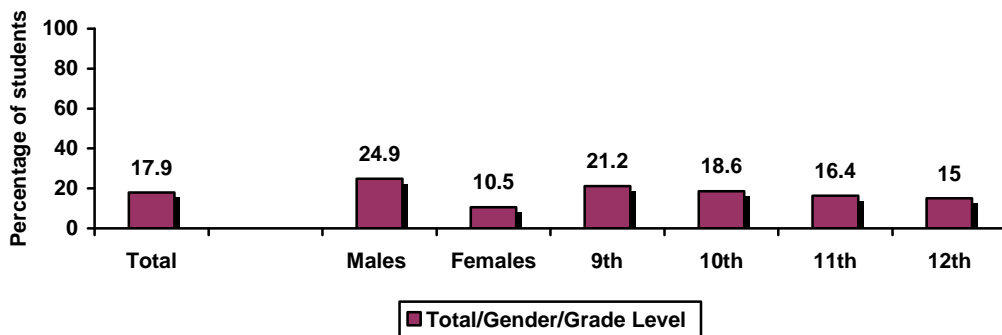
### Watched Television Three or More Hours per Day

Statewide, 23.7% of students watched television three or more hours per day on an average school day.



### Used Computers Three or More Hours per Day

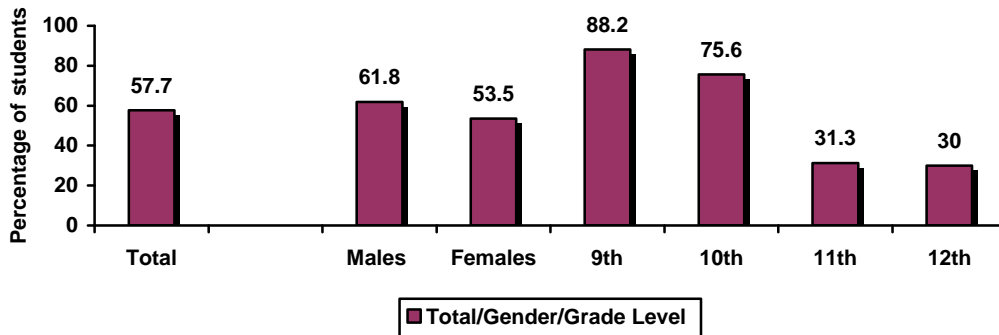
Statewide, 17.9% of students played video or computer games or used a computer for something that was not school work for three or more hours per day on an average school day.



## 2009 Montana High School YRBS Results

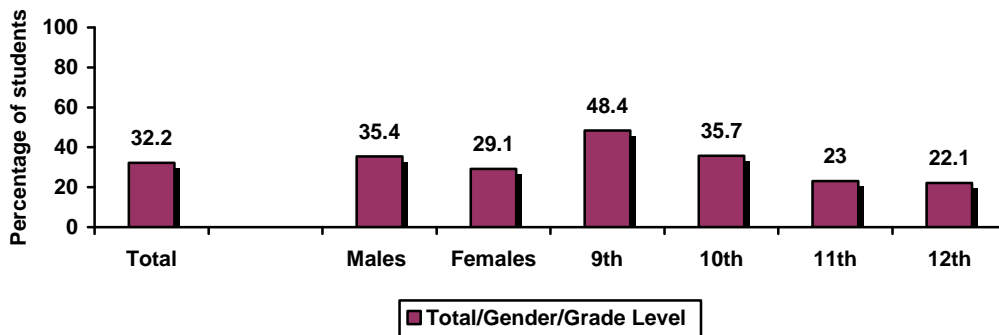
### Attended Physical Education Classes

Statewide, 57.7% of students went to physical education (PE) classes on one or more days in an average week when they were in school.



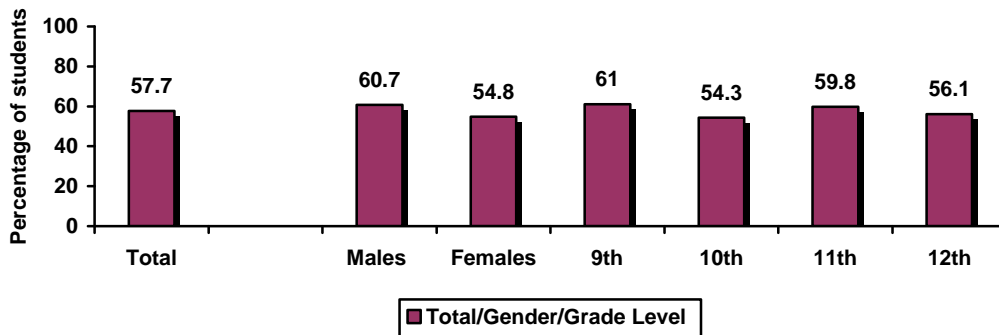
### Attended Physical Education Classes Daily

Statewide, 32.2% of students went to PE classes five days in an average week when they were in school.



### Played on at Least One Sports Team

Statewide, 57.7% of students had played on at least one sports team (run by their school or community groups) during the 12 months before the survey.



For complete 2009 Montana YRBS reports, including frequency distributions and trend data, go to [www.opi.mt.gov/yrbs](http://www.opi.mt.gov/yrbs).

# 2009 Montana Youth Risk Behavior Survey Results



**American Indian Students On or Near a Reservation**

**American Indian Students in Urban Schools**

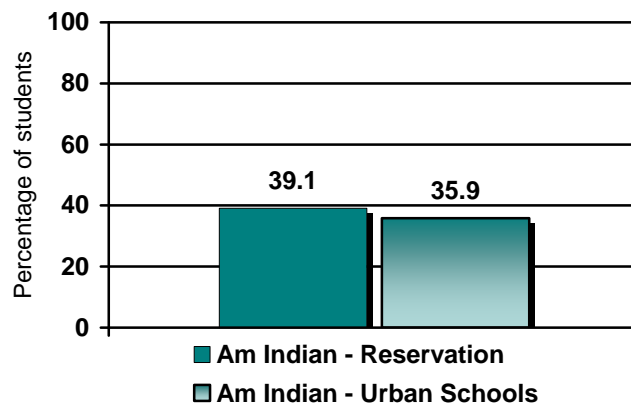




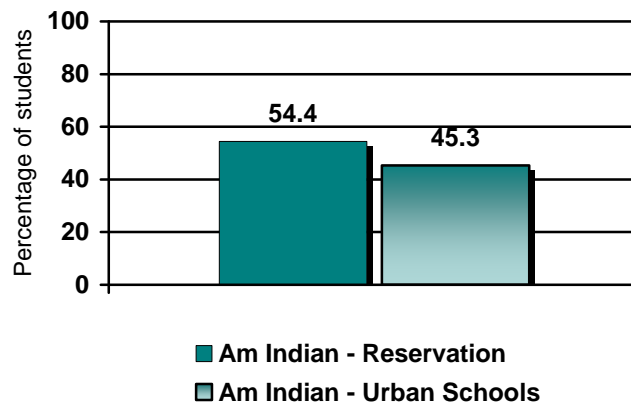
## 2009 Montana YRBS Results for American Indian Students On or Near a Reservation and American Indian Students in Urban Schools

The following data results are for American Indian students in Montana high schools. School districts that lie wholly or partially within the confines of an Indian reservation or share a border with a reservation are termed "reservation" schools; conversely, all other schools are termed "urban" schools. The results are based upon surveys with 588 American Indian students on or near a reservation and 500 American Indian students in urban schools during February of 2009.

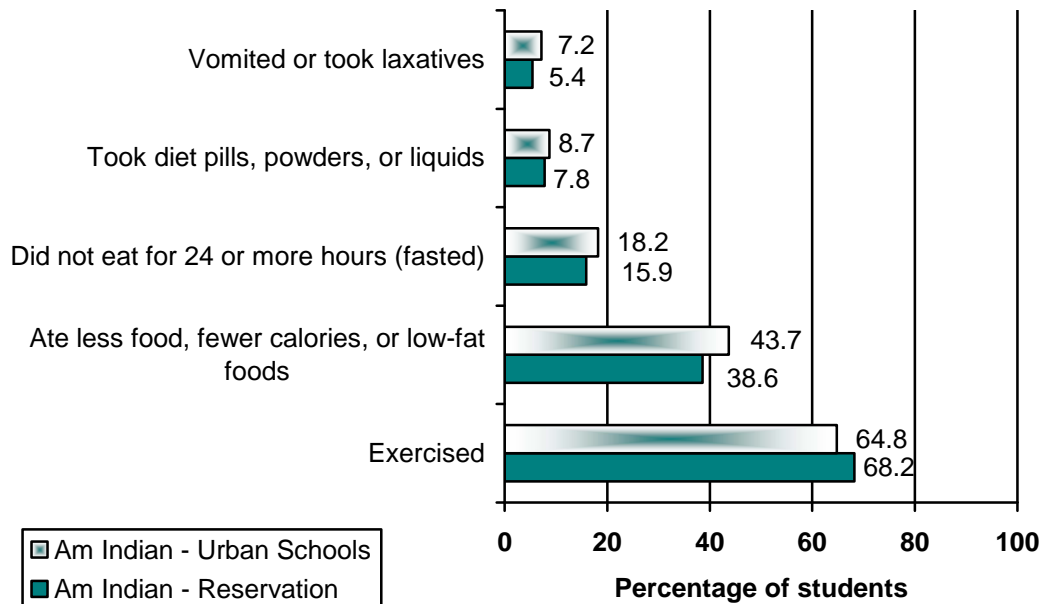
### Described Themselves as Overweight



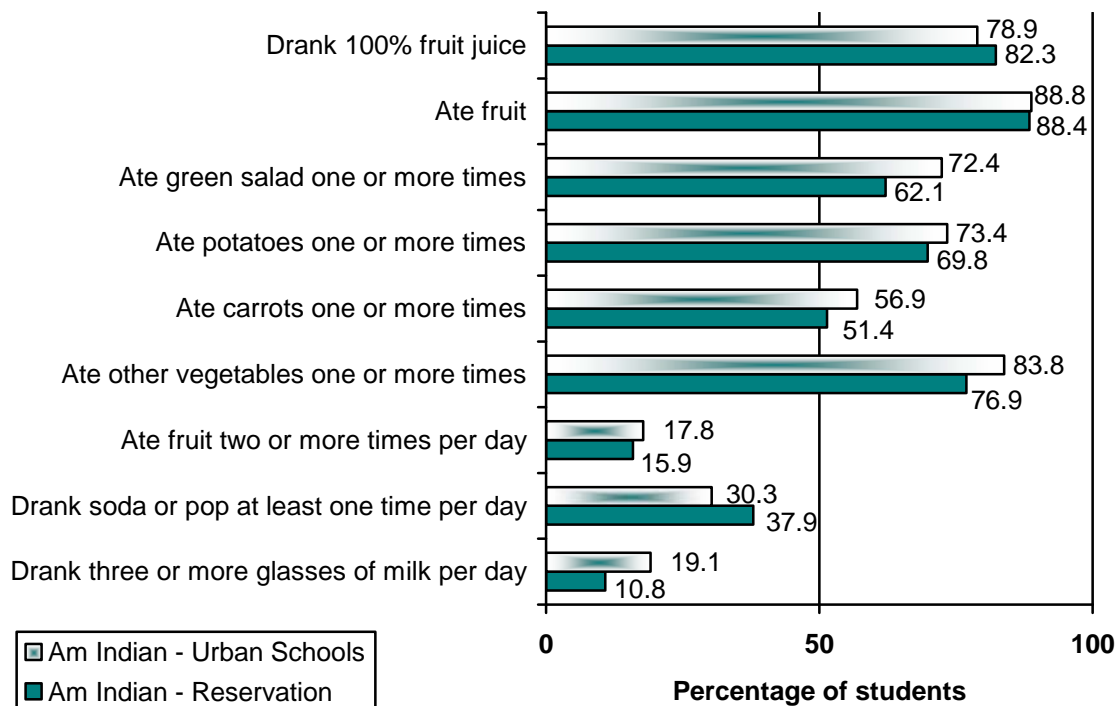
### Were trying to Lose Weight



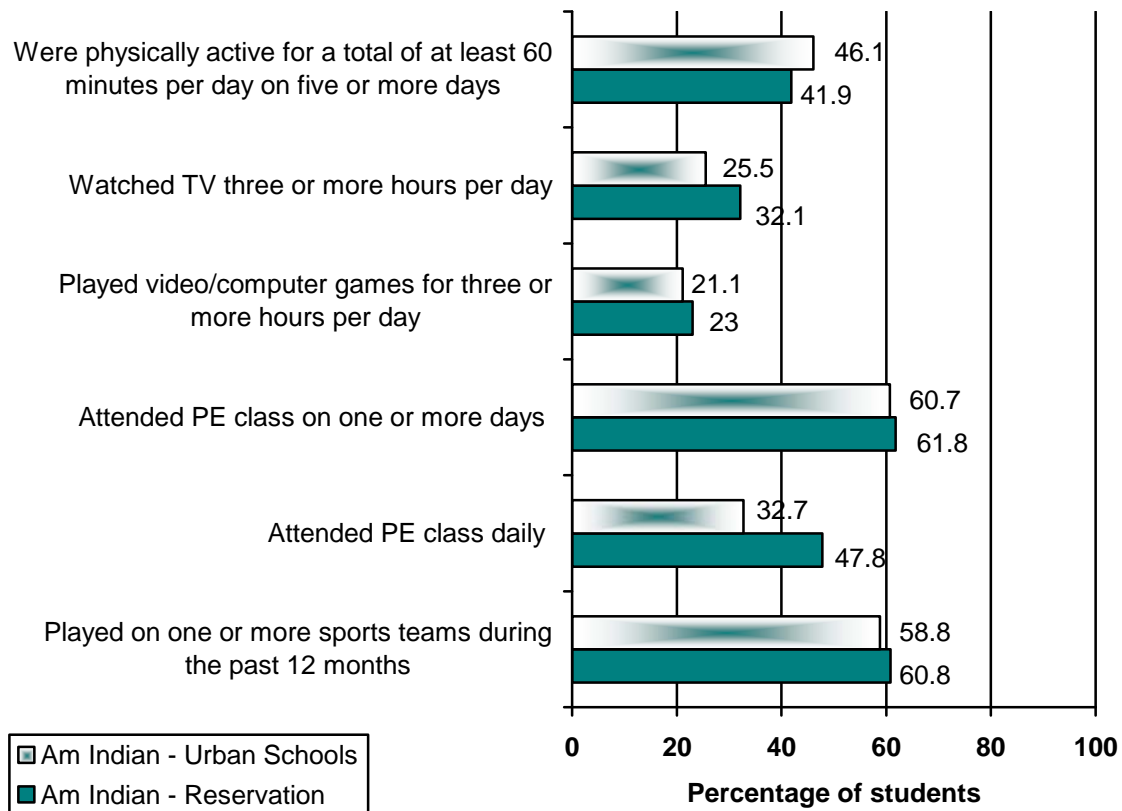
## Weight Control Practices Used to Lose Weight or Keep from Gaining Weight During the 30 Days Before the Survey



## Dietary Practices During the Seven Days Before the Survey



## Physical Activity During the Seven Days Before the Survey



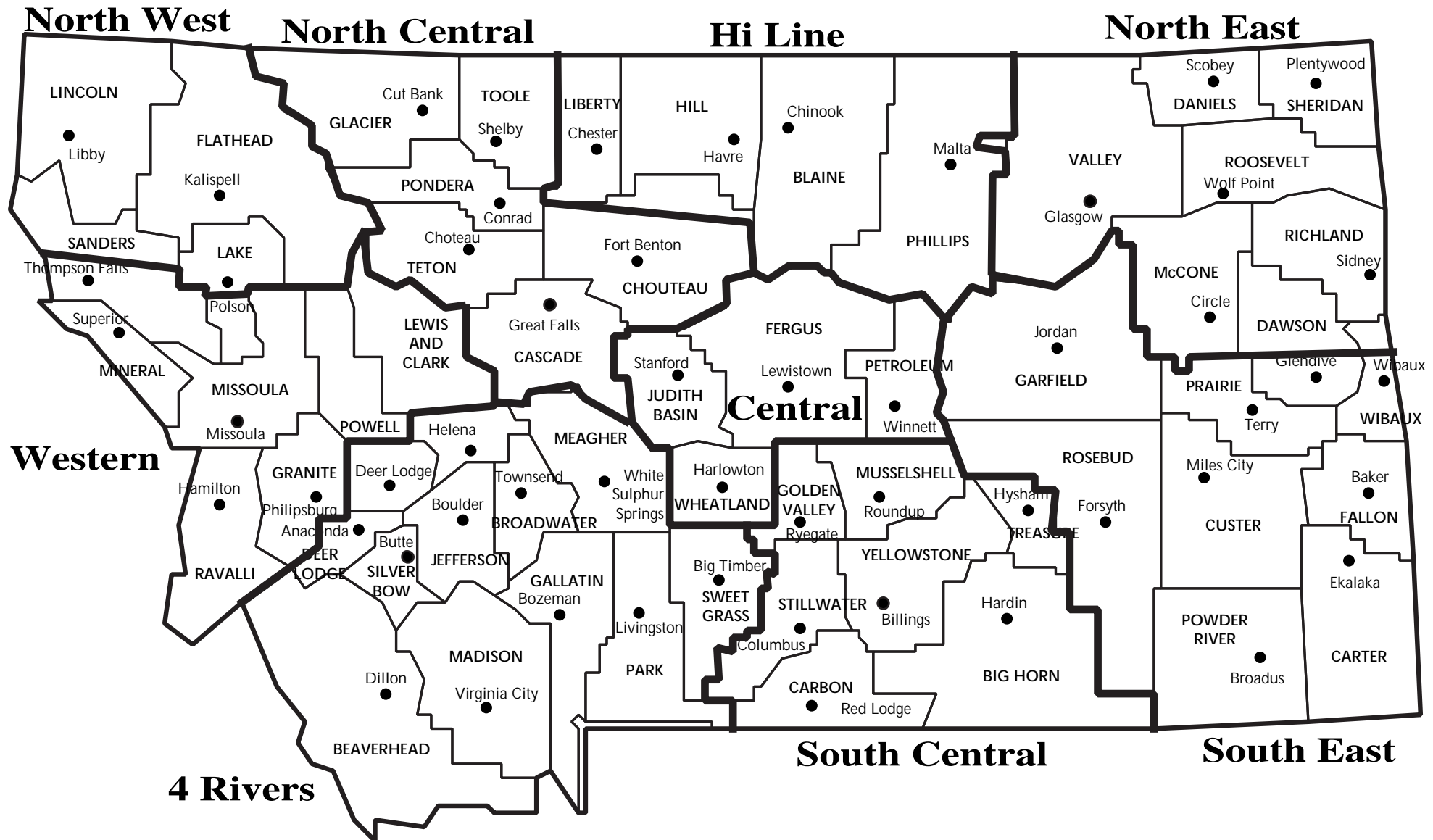
For complete Montana American Indian student reports, including frequency distributions for the 2009 Montana YRBS and trend data go to [www.opi.mt.gov/yrbs](http://www.opi.mt.gov/yrbs).

# 2009 Montana Youth Risk Behavior Survey Results



## Regional Data

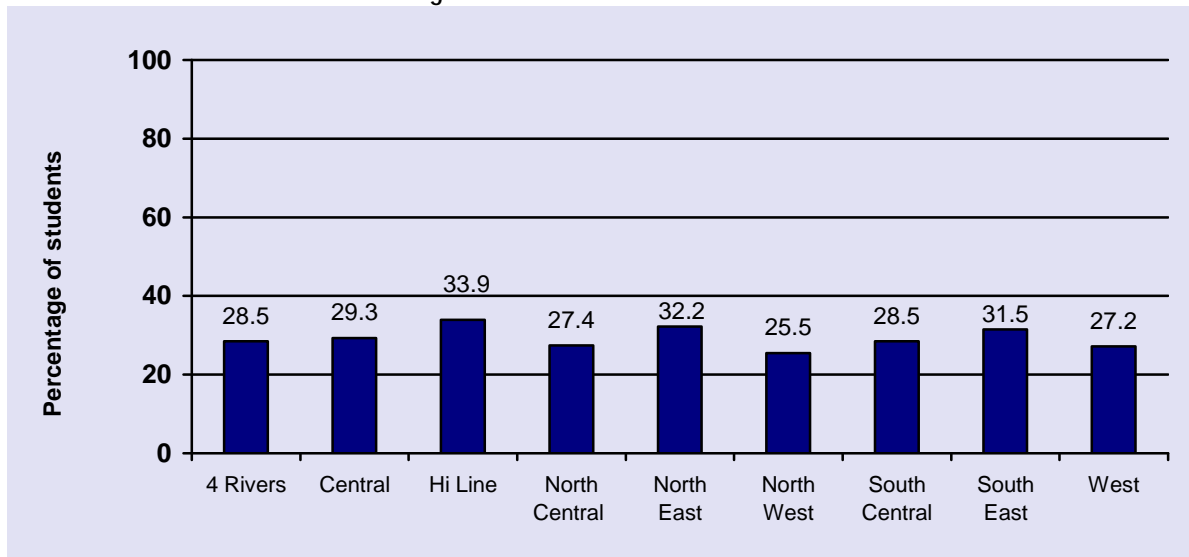
# Montana Association of School Superintendents



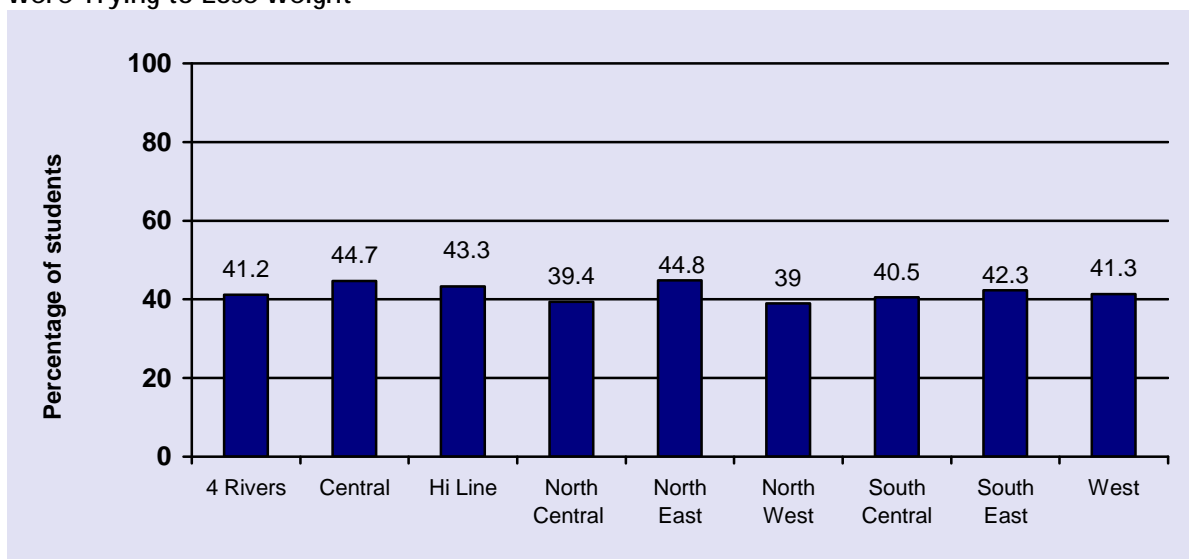
## 2009 MONTANA YOUTH RISK BEHAVIOR SURVEY REGIONAL DATA RESULTS

The following data results are from nine Montana geographic regions (i.e., Montana Association of School Superintendents, MASS, regions). The results are based upon surveys with high schools students during February of 2009 in the following regions: 4 Rivers - 1,520 students, Central - 263 students, Hi Line - 676 students, North Central - 1,096 students, North East - 793 students, North West - 813 students, South Central - 1,308 students, South East - 642 students and West - 1,187 students.

### Described Themselves as Overweight

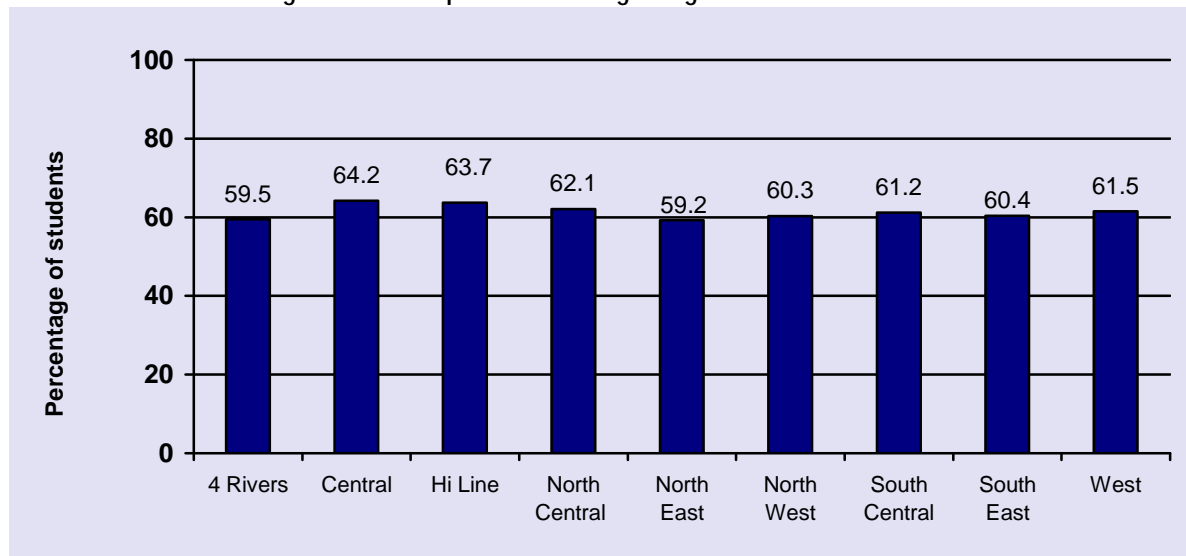


### Were Trying to Lose Weight

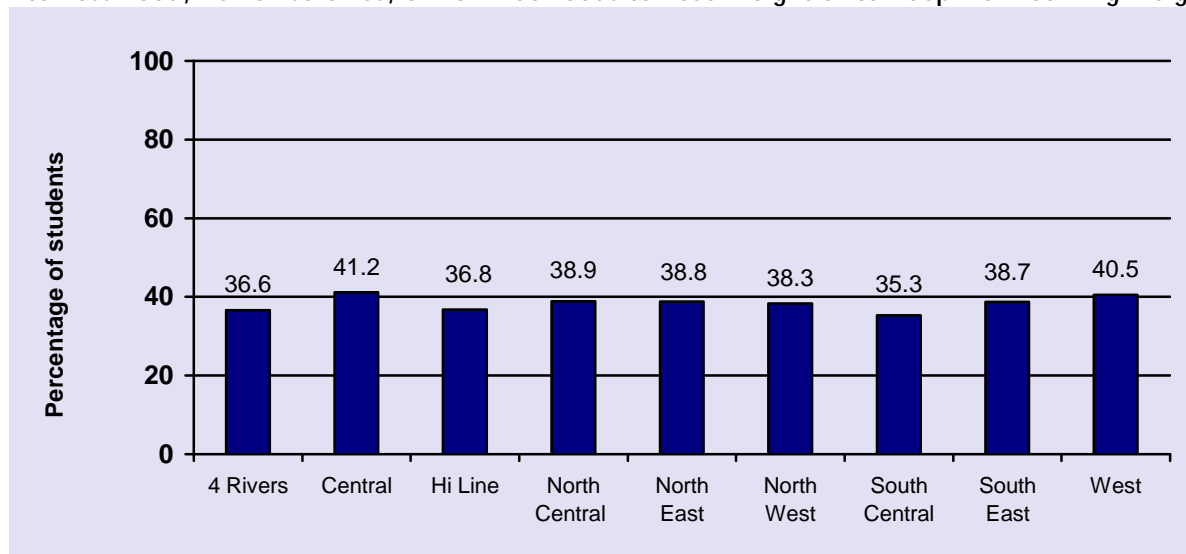


## 2009 MONTANA YOUTH RISK BEHAVIOR SURVEY REGIONAL DATA RESULTS

### Exercised to Lose Weight or to Keep from Gaining Weight



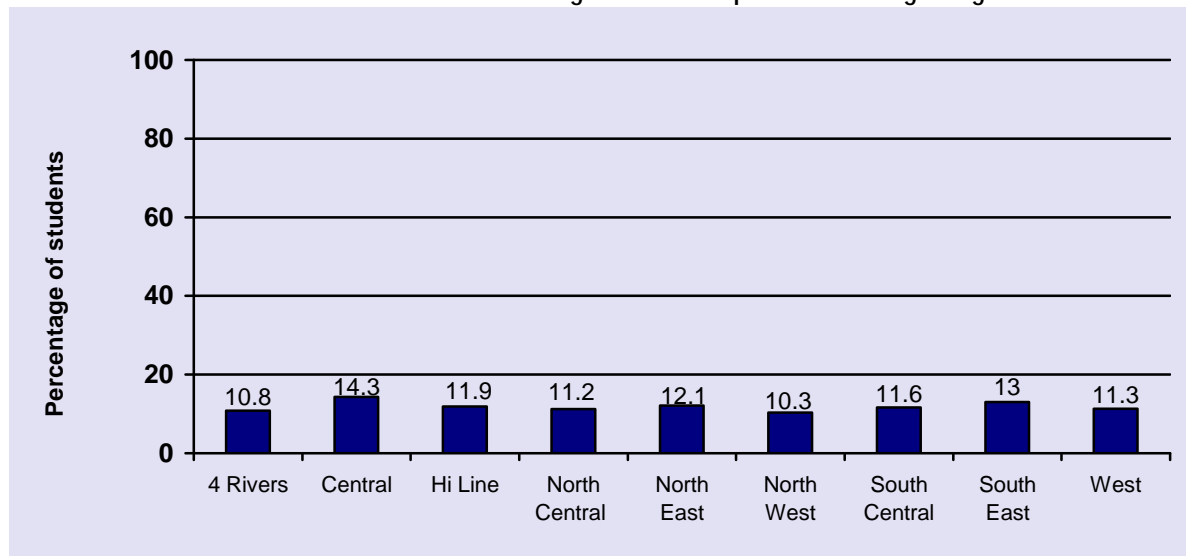
### Ate Less Food, Fewer Calories, or Low-Fat Foods to Lose Weight or to Keep from Gaining Weight



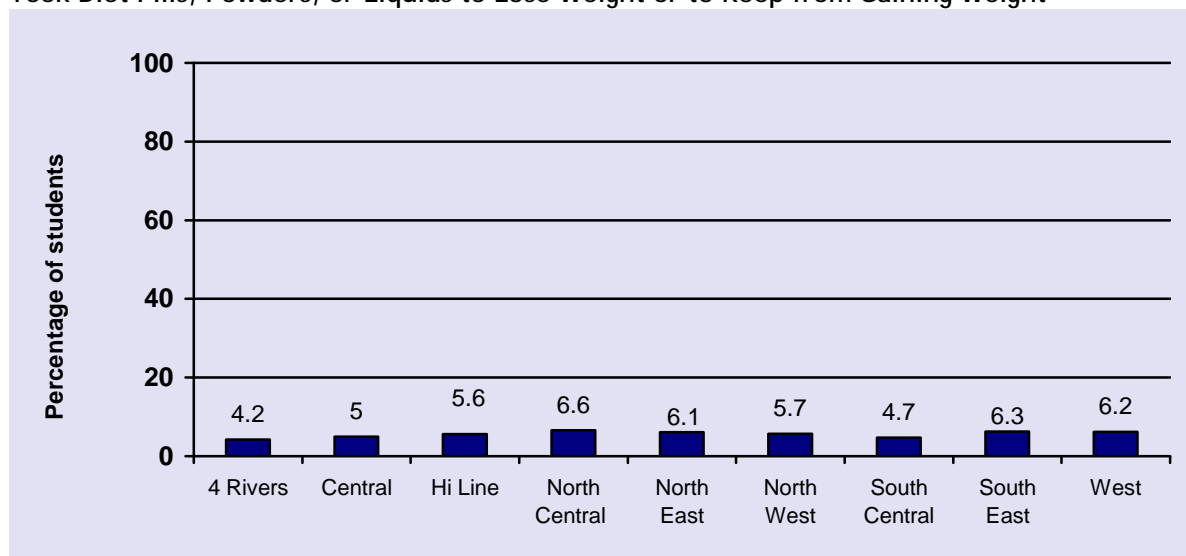


## 2009 MONTANA YOUTH RISK BEHAVIOR SURVEY REGIONAL DATA RESULTS

Did Not Eat for 24 or More Hours to Lose Weight or to Keep from Gaining Weight

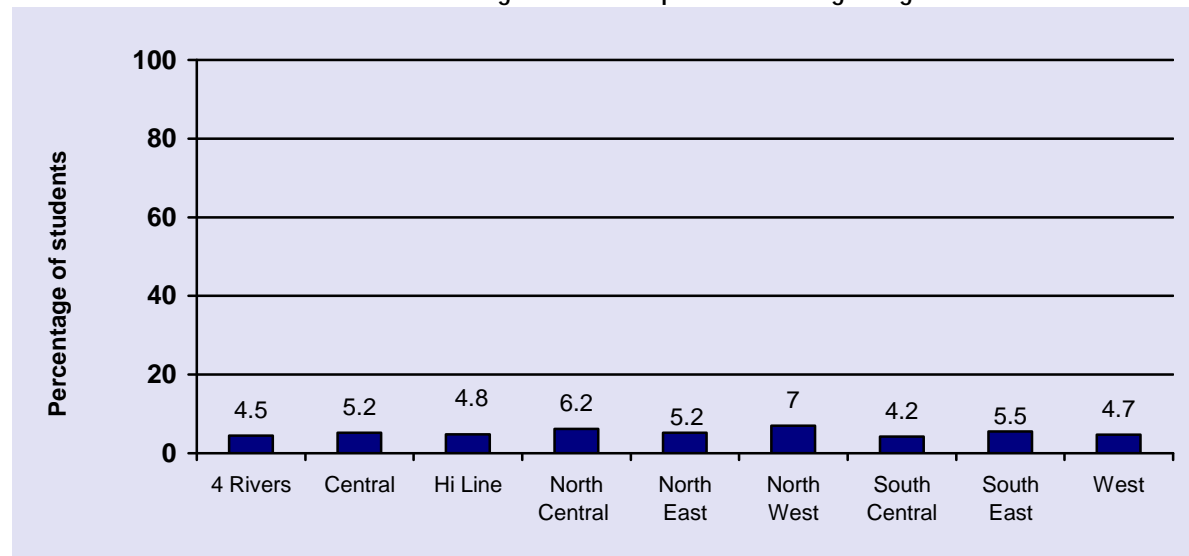


Took Diet Pills, Powders, or Liquids to Lose Weight or to Keep from Gaining Weight



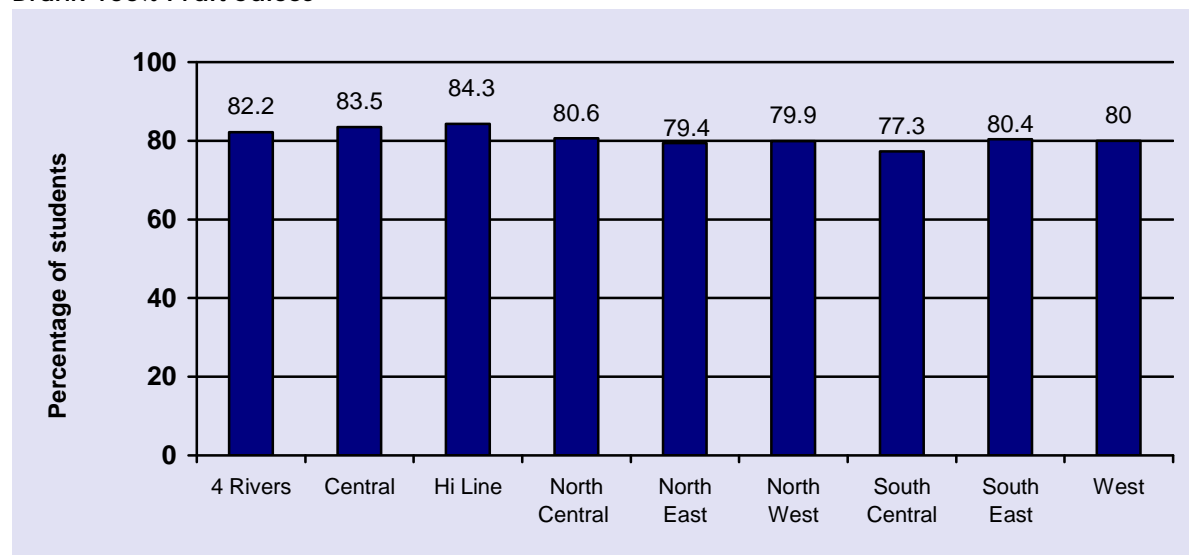
## 2009 MONTANA YOUTH RISK BEHAVIOR SURVEY REGIONAL DATA RESULTS

### Vomited or Took Laxatives to Lose Weight or to Keep from Gaining Weight



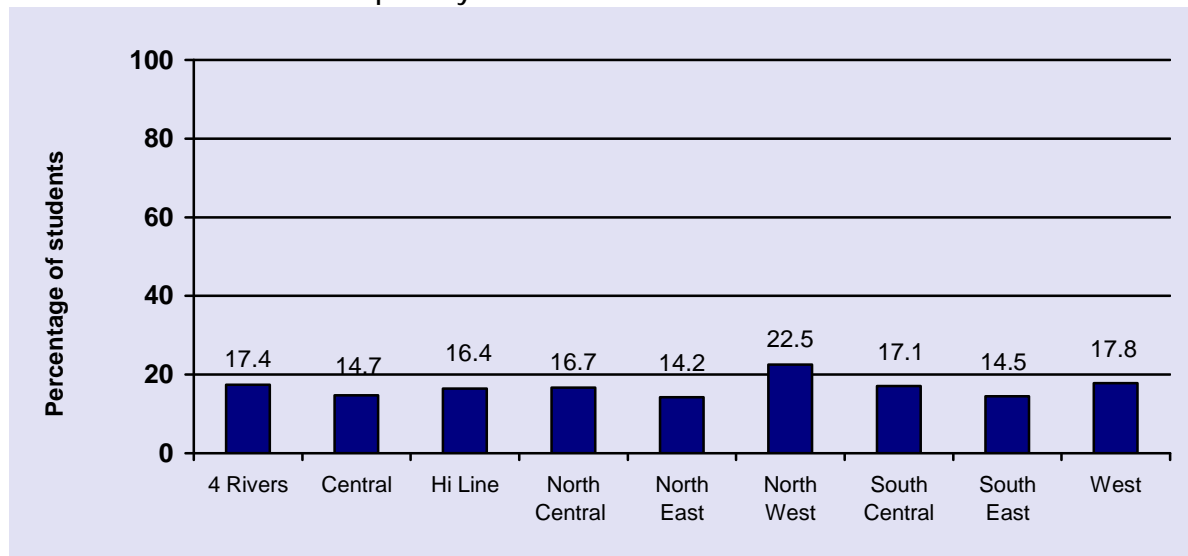
### DIETARY BEHAVIORS REPORTED DURING THE SEVEN DAYS BEFORE THE SURVEY

#### Drank 100% Fruit Juices

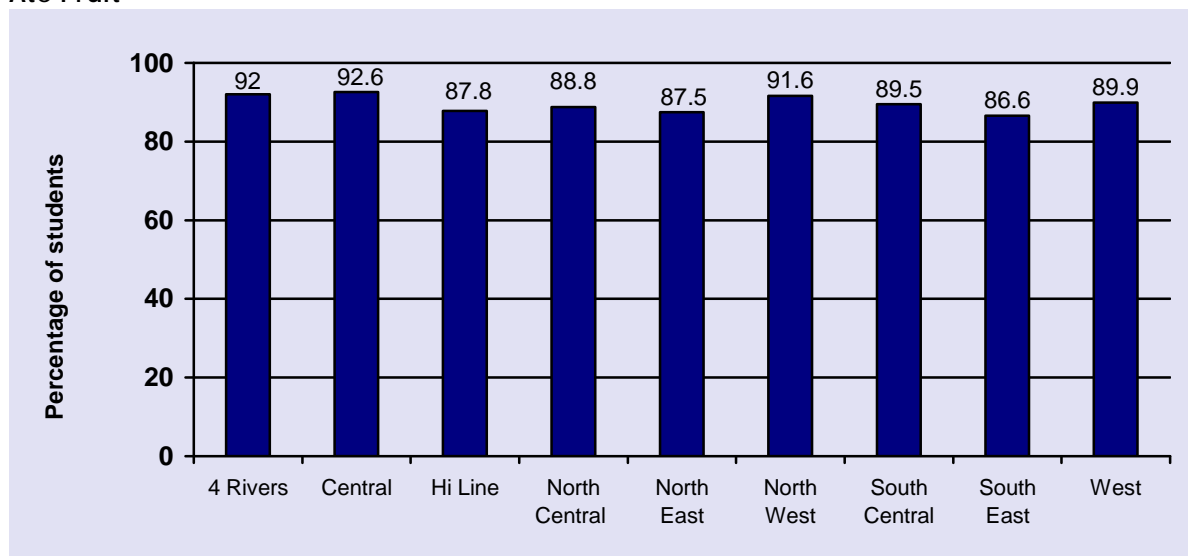


## 2009 MONTANA YOUTH RISK BEHAVIOR SURVEY REGIONAL DATA RESULTS

### Ate Fruit Two or More Times per Day

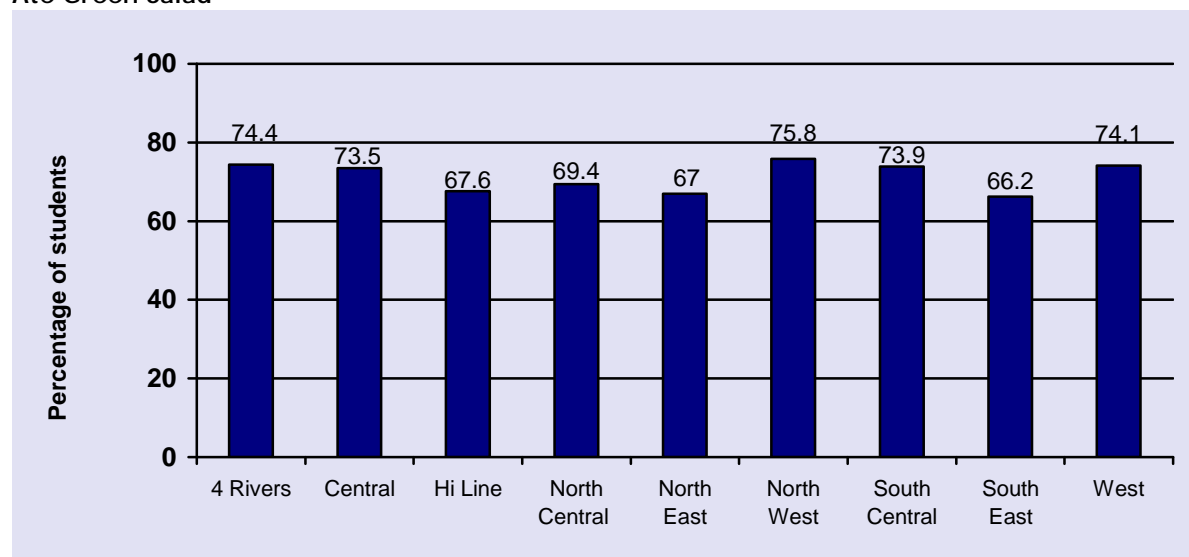


### Ate Fruit

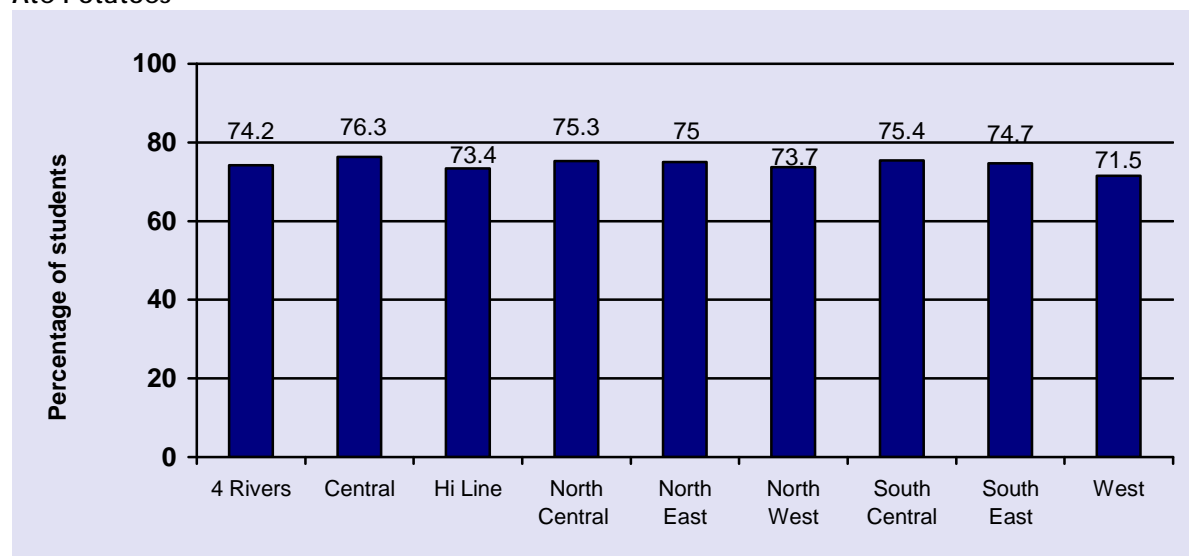


## 2009 MONTANA YOUTH RISK BEHAVIOR SURVEY REGIONAL DATA RESULTS

### Ate Green Salad

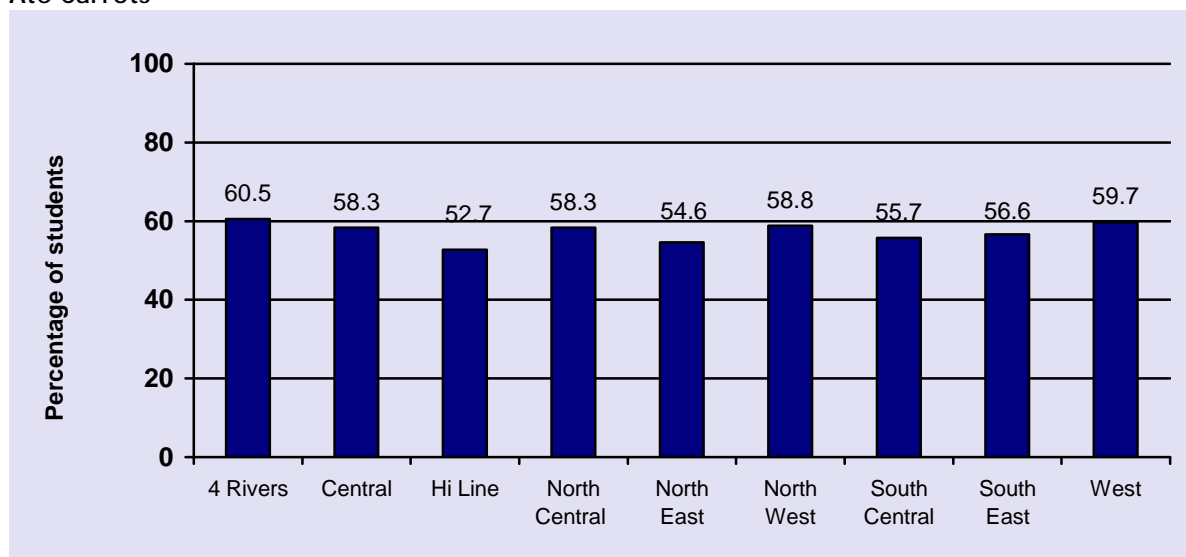


### Ate Potatoes

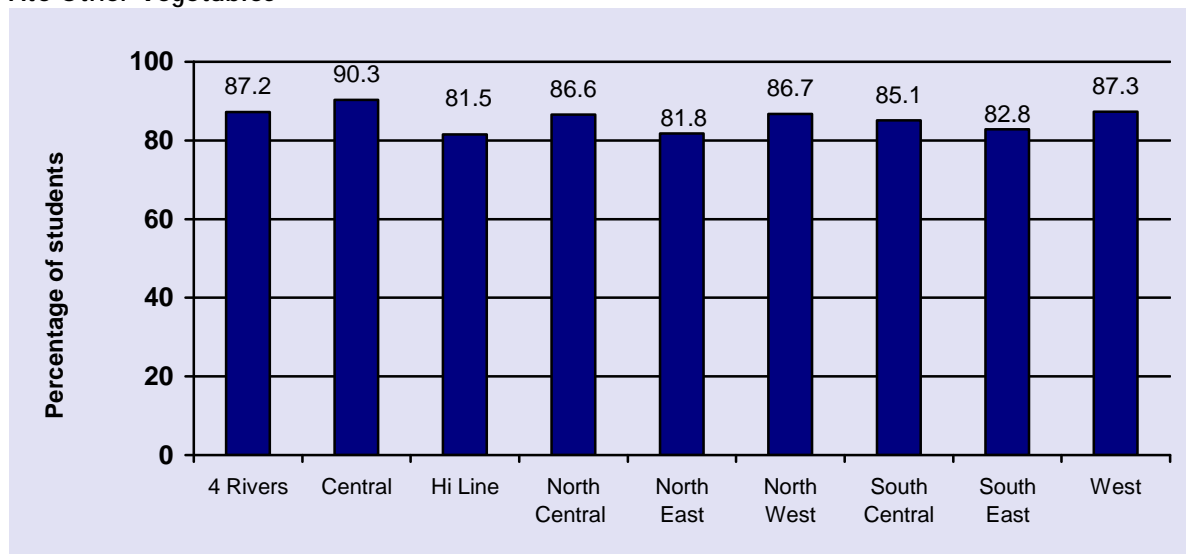


## 2009 MONTANA YOUTH RISK BEHAVIOR SURVEY REGIONAL DATA RESULTS

### Ate Carrots

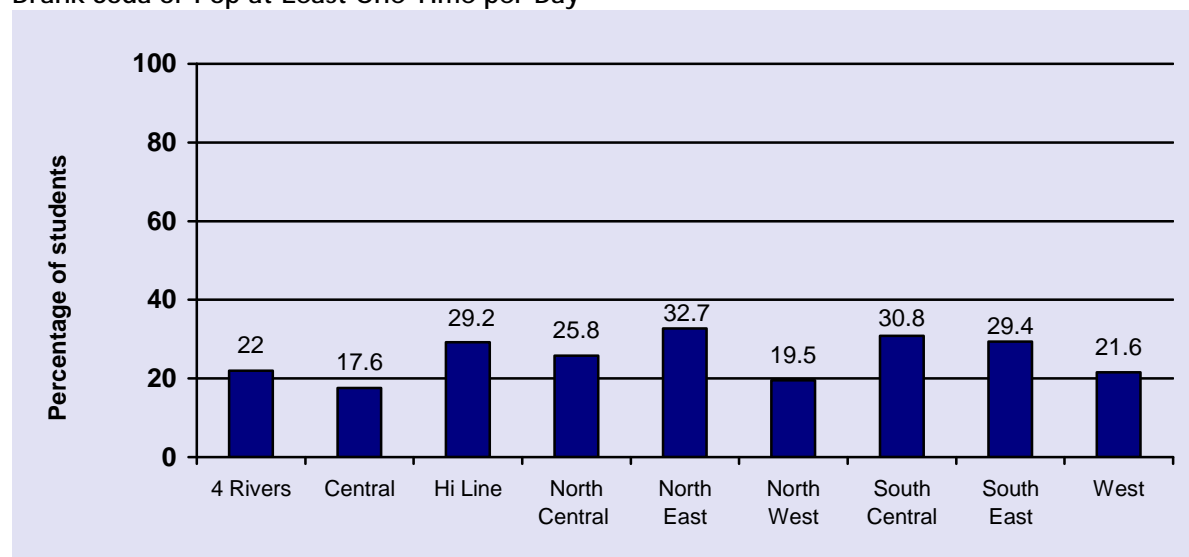


### Ate Other Vegetables

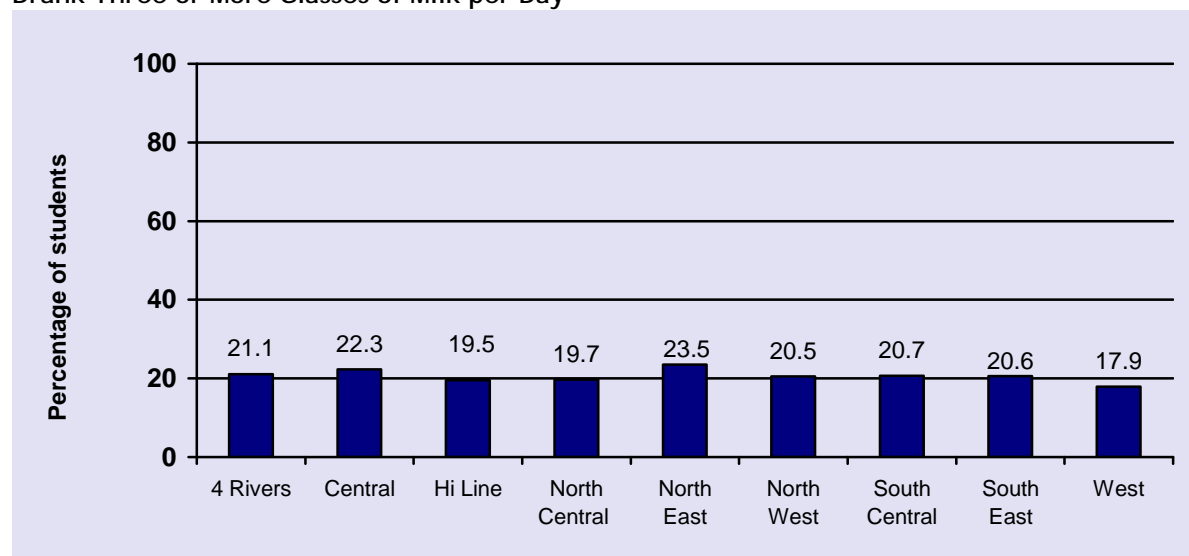


## 2009 MONTANA YOUTH RISK BEHAVIOR SURVEY REGIONAL DATA RESULTS

### Drank Soda or Pop at Least One Time per Day



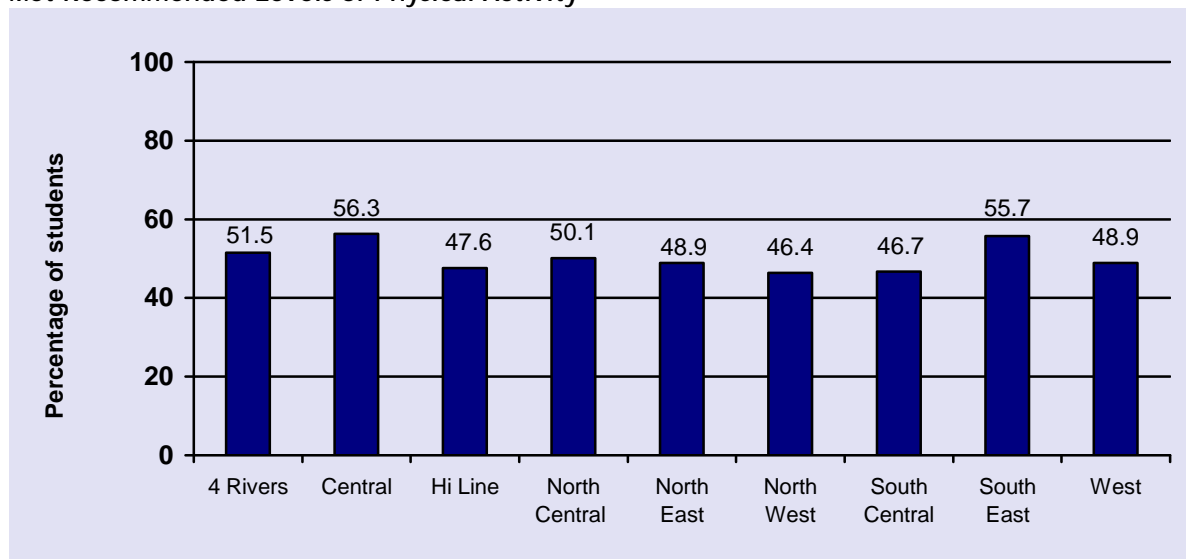
### Drank Three or More Glasses of Milk per Day



## 2009 MONTANA YOUTH RISK BEHAVIOR SURVEY REGIONAL DATA RESULTS

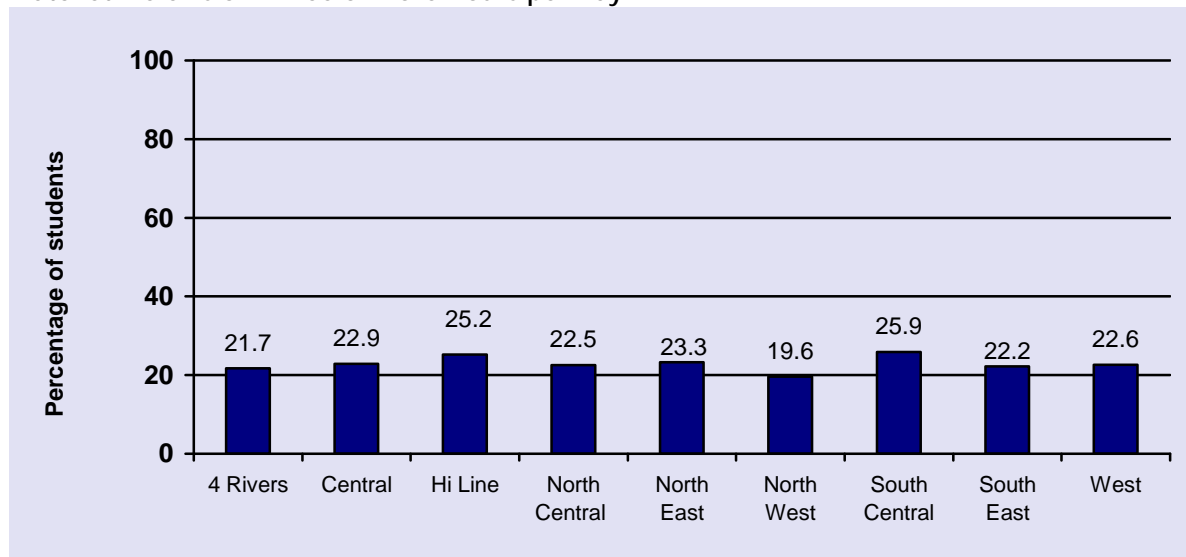
### PHYSICAL ACTIVITY

Met Recommended Levels of Physical Activity\*



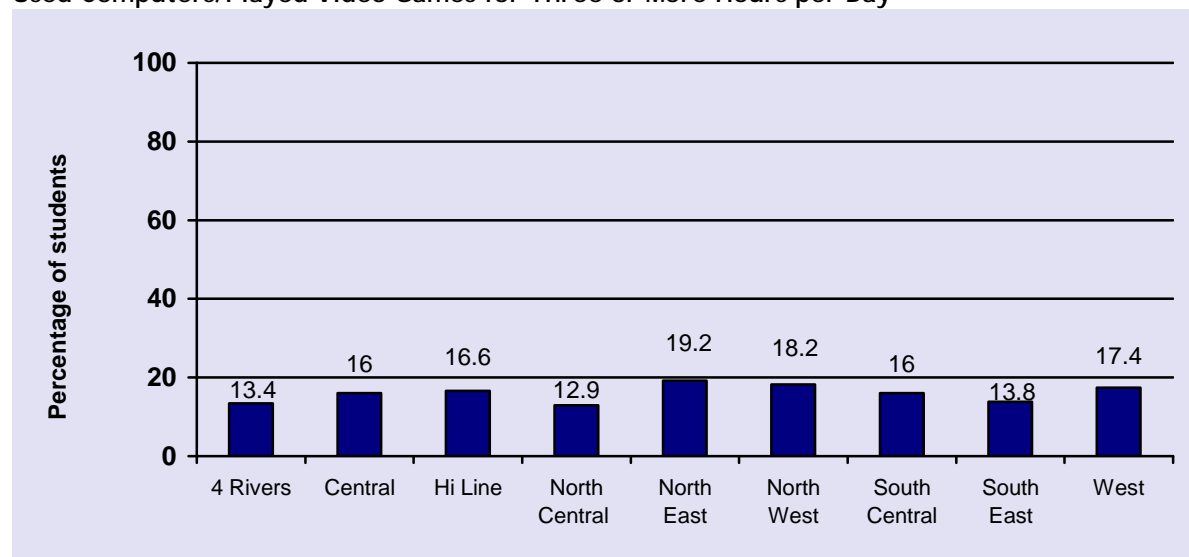
\* Physical activity that increases heart rate and makes you breathe hard for at least 60 minutes per day on five or more of the past seven days.

Watched Television Three or More Hours per Day

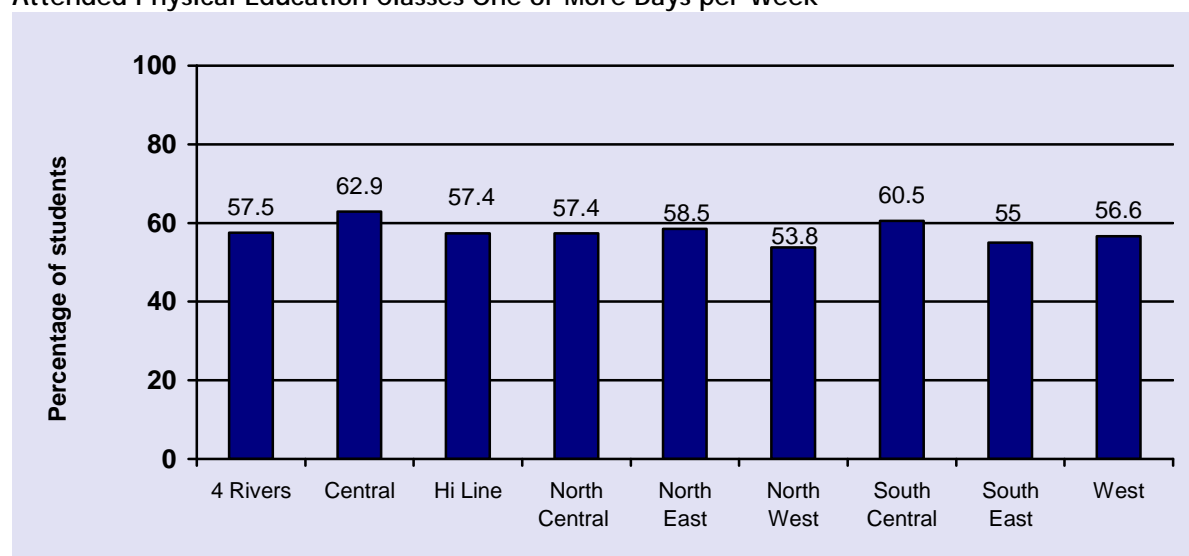


## 2009 MONTANA YOUTH RISK BEHAVIOR SURVEY REGIONAL DATA RESULTS

Used Computers/Played Video Games for Three or More Hours per Day



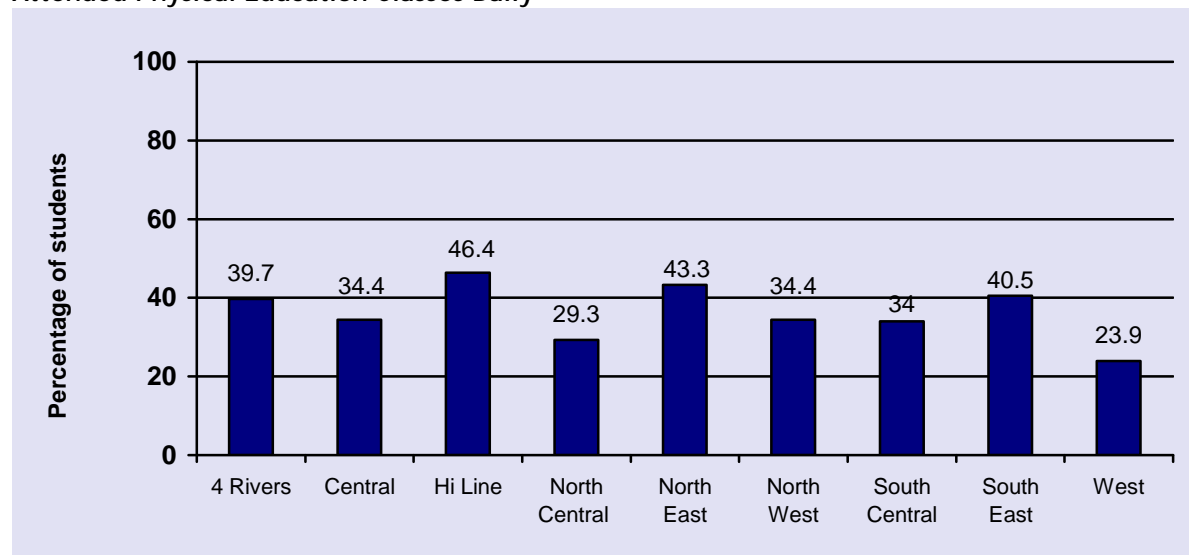
Attended Physical Education Classes One or More Days per Week



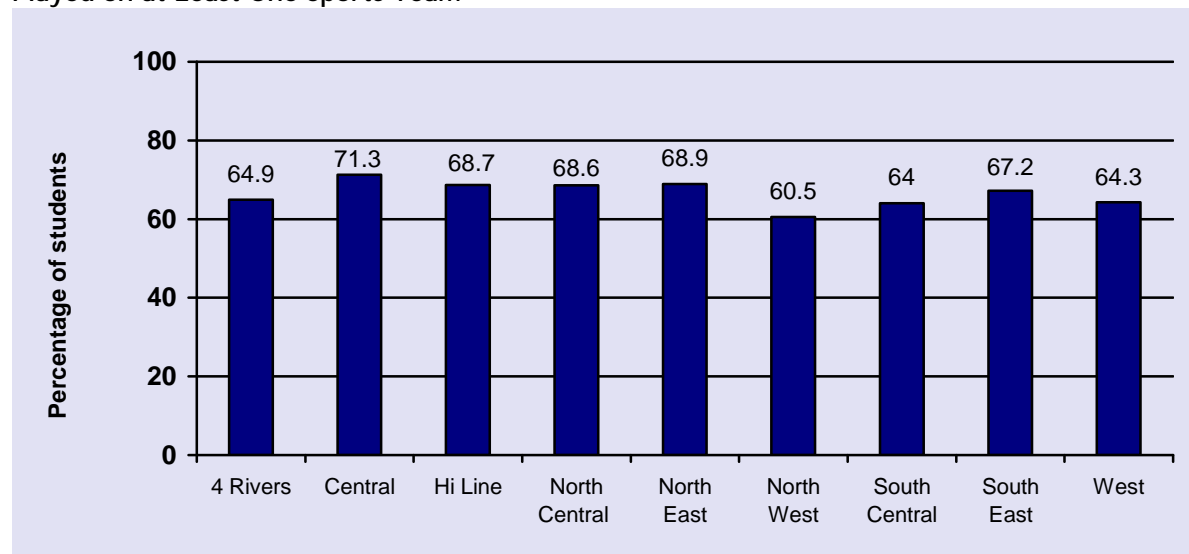


## 2009 MONTANA YOUTH RISK BEHAVIOR SURVEY REGIONAL DATA RESULTS

### Attended Physical Education Classes Daily



### Played on at Least One Sports Team



Complete 2009 Montana YRBS Regional data can be found at  
[www.opi.mt.gov/yrbs](http://www.opi.mt.gov/yrbs).

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Montana Youth Risk Behavior Survey  
[www.opi.mt.gov/yrbs](http://www.opi.mt.gov/yrbs)



Montana  
**Office of Public Instruction**  
Denise Juneau, State Superintendent